

10/584177

JAP20 Rec'd PCT/PTO 23 JUN 2006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : (not yet assigned)
Applicant : Yuichi Shibazaki
Title : APPARATUS FOR HOLDING OPTICAL
ELEMENT, BARREL, EXPOSURE
APPARATUS, AND DEVICE PRODUCING
METHOD
Filed :
TC/A.U. : (not yet assigned)
Examiner : (not yet assigned)
Docket No. : 2281.2.21
Customer No. : 21552

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT

Dear Sir:

Transmitted herewith is an Information Disclosure Statement disclosing information which has come to the attention of applicant and/or his attorneys and is being submitted so as to comply with the duty of disclosure set forth in 37 C.F.R. § 1.56. In accordance with 37 C.F.R. § 1.97(b), the enclosed Statement is being filed within three (3) months of the filing date of the above-identified application or before the mailing date of a first Action on the merits.

Neither applicant nor his attorneys make any representation that any information disclosed herein may be "prior art" within the meaning of that term under 35 U.S.C. § 102 or § 103. Moreover, pursuant to 37 C.F.R. § 1.97, the filing of this Information Disclosure Statement shall not be construed as a representation that a search has been made or as an admission that the information cited herein is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b).

In accordance with 37 C.F.R. § 1.98, transmitted herewith is:

1. A completed copy of Form PTO/SB/08a "Information Disclosure Statement by Applicant" listing the patents, publications and other information being submitted for consideration.

As this application is being filed after June 30, 2003, copies of the U.S. patents and published U.S. patent applications listed on the enclosed Form PTO/SB/08a are not required and, therefore, not included herewith.

NON-ENGLISH INFORMATION

Pursuant to 37 C.F.R. § 1.98, following is a concise explanation of the relevance (as it is presently understood by the individual designated in 37 C.F.R. § 1.56(c) most knowledgeable about the content of the information), of each listed patent, publication or other information that is not in the English language:

1. Japanese Publication No. 10-186198 published July 14, 1998 discloses:
PROBLEM TO BE SOLVED: To provide a parallel and straight fine adjustment device which is excellent in parallelism and straightness with respect to movement, whose structure is simple and which is produced at low cost.
SOLUTION: An internal lens barrel 5 is connected to the ends of three pairs of parallel springs 7a1-7b1, 7a2-(7b2), 7a3-7b3 having the same shape and made of the same material, and a lens barrel 1 is connected to the other ends of three pairs of parallel springs. Then, the parallel springs are attached in a state where they have no deflection, and arranged on a plane perpendicular to the optical axis of the lens of the lens barrel 5 so that synthetic force obtained by synthesizing force generated respectively in the parallel springs when the lens barrel 5 is moved may be zero. When the bottom part of the lens barrel 5 is pressed by a lever member 4 by operating a micrometer 3, the lens barrel 5 rises. However, at such a time, the same tensile force is exerted on the respective parallel springs and the synthetic force thereof becomes zero, then the lens barrel 5 is moved straight and in parallel with the optical axis.
2. Japanese Publication No. 2002-134384 published May 10, 2002 discloses:
PROBLEM TO BE SOLVED: To maintain high purity in a purging gas in an airtight chamber, and at the same time, to reduce the influence due to vibration

that is generated, when a wafer stage is driven. SOLUTION: Between the bottom surface of a base member 21 where a reticle stage system is placed, and the upper surface of a frame 2E where a projection optical system 4 is placed, a flexible cylindrical film-like cover 50 is installed, so that the external surface of the projection optical system 4 is covered. The purging gas, transmitted through an exposure beam, is supplied to the inside of the projection optical system 4. The upper-and the lower-end sections of the film-like cover 50 are sealed by a liquid seal mechanism of a system for dipping edge members 55A and 55B into liquid 54 having high viscosity.

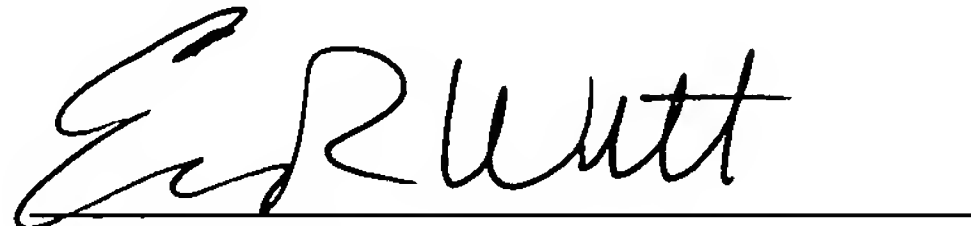
3. Japanese Publication No. 2002-131605 published May 9, 2002 discloses:
PROBLEM TO BE SOLVED: To provide a holding device, an optical element holding device and a lens barrel with which the positioning of a member to be held is easily and accurately performed and also to provide the manufacturing method of an exposure device by which exposure accuracy is improved, and a microdevice. **SOLUTION:** An optical element 38 is held by a lens frame 42, and the lens frame 42 is supported through flexure members 41 arranged at three points at a uniform angular interval on a frame body 40. At the flexure main body 84 of the flexure member 41, a connection block 84a connected to the lens frame 42 and a flexure fixing part 91 fixed to the frame body 40 are so-called kinematically connected so that the degrees of freedom of six motions for movements and rotation along/around each of axes, that is, an axis R of the optical element 38 in a radial direction, an axis θ thereof in a peripheral direction and an axis Z thereof in an optical axis direction inside a polar coordinate system having nearly the center of the optical element 38 as an origin are secured.

4. Japanese Publication No. 11-044834 published February 16, 1999 discloses:
PROBLEM TO BE SOLVED: To realize in a space saved state with high cleanness an optical element moving device accurately driving an optical element for adjusting the optical characteristic of a projection optical system on an optical axis by providing a damper means between a movable part and a fixed part. **SOLUTION:** This device is provided with the damper means between the movable part and the fixed part. Namely, in this device, the driving element 4 is constituted of a bellows 9, etc., and its one end is fixed on a fixed base and the other end is fixed on a clamp top board coupled with a movable base. The element 4 is constituted of the bellows 9, two flanges 10a and 10b, columns 11a and 11b and a viscous body 12 interposed in a gap between the columns 11a and 11b. One flange 10a is coupled with the clamp top board through the gap of a leaf spring piece and the other flange 10b is arranged in the fixed base, so that air pressure applied to the inside of the bellows 9 is transmitted to the movable base. By using such a driving element 4, damping characteristic is added to the operation of a mechanism.

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5. Japanese Publication No. 2001-343575 published December 14, 2001 discloses:
PROBLEM TO BE SOLVED: To provide an optical element holding device capable of attaining a compact lens barrel, and also, capable of highly accurately driving an optical element positioned near the intermediate part of the lens barrel.
SOLUTION: The device is provided with an inner ring part 44a for holding a movable lens 38a being engaged with the circumferential edge of the movable lens 38a, and an outer ring part 44b which is connected to the inner ring part 44a. The outer ring part 44b and the inner ring part 44a are integrally formed, and also, the outer ring part 44b is arranged outside the inner ring part 44a. The inner ring part 44a and the outer ring part 44b are connected together so that they may be relatively moved almost along the optical axis of the movable lens 38a based on the displacement of an actuator 50.

Respectfully submitted,



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Date: June 23, 2006

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Substitute for form 1449A/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary) Sheet 1 Of 1		Application Number	10/584177
		Filing Date	
		First Named Inventor	Yuichi Shibazaki
		Group Art Unit	
		Examiner Name	
		Attorney Docket Number	2281.2.21

U.S. PATENT DOCUMENTS					
Examiner Initials *	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
	U1	US-2001/0038500 A1	11/08/2001	Shibazaki	
	U2	US-6,259,571	07/10/2001	Holderer et al.	
	U3	US-2002/0085291 A1	07/04/2002	Dieker	

FOREIGN PATENT DOCUMENTS						
Examiner Initials *	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)				
	F1	JP-10-186198	07/14/1998	Ushio Inc.		
	F2	JP-2002-134384	05/10/2002	Nikon Corp.		
	F3	JP-2002-131605	05/09/2002	Nikon Corp.		
	F4	JP-11-044834	02/16/1999	Canon Inc.		
	F5	JP-2001-343575	12/14/2001	Nikon Corp.		

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you are required to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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